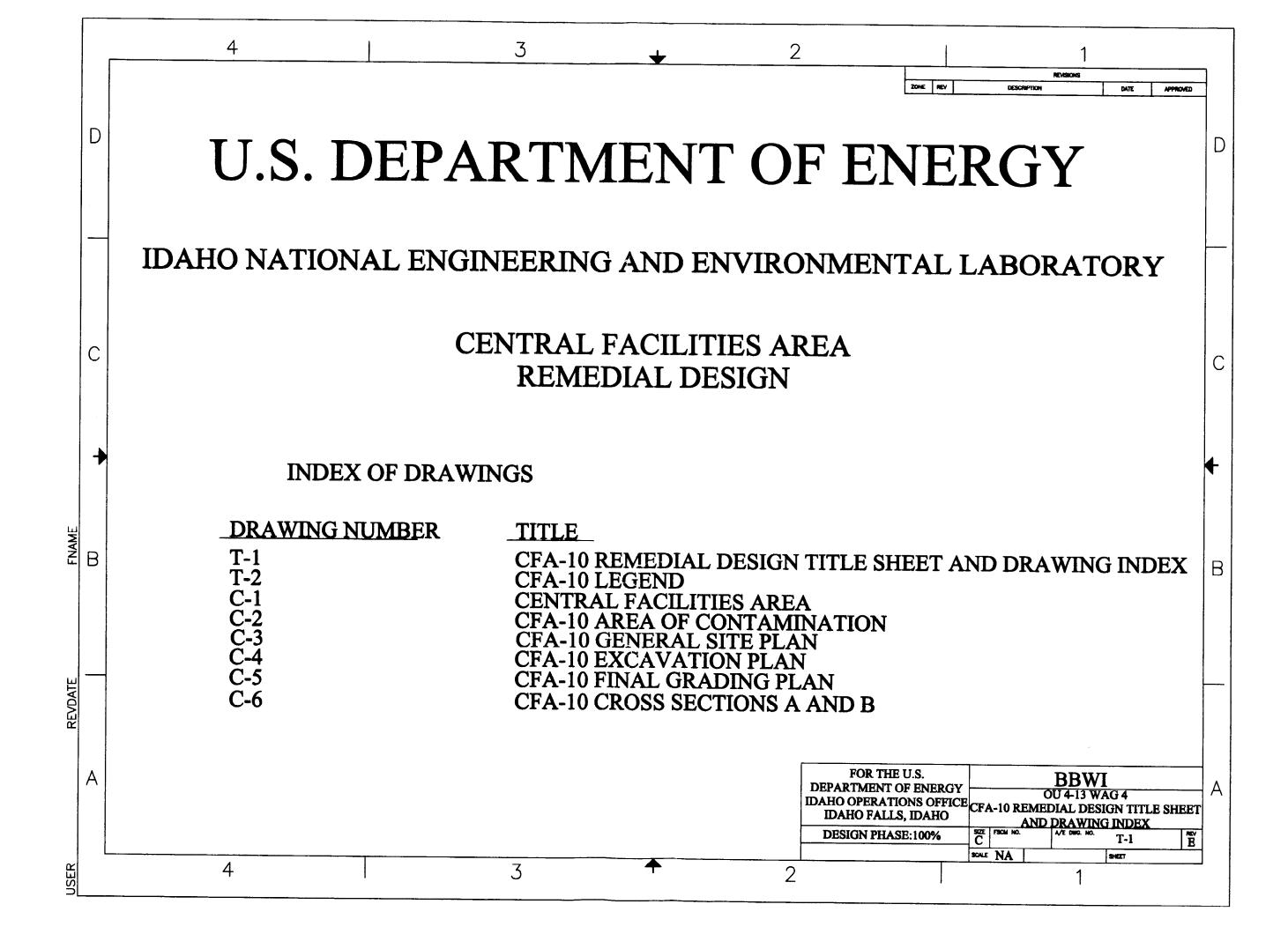
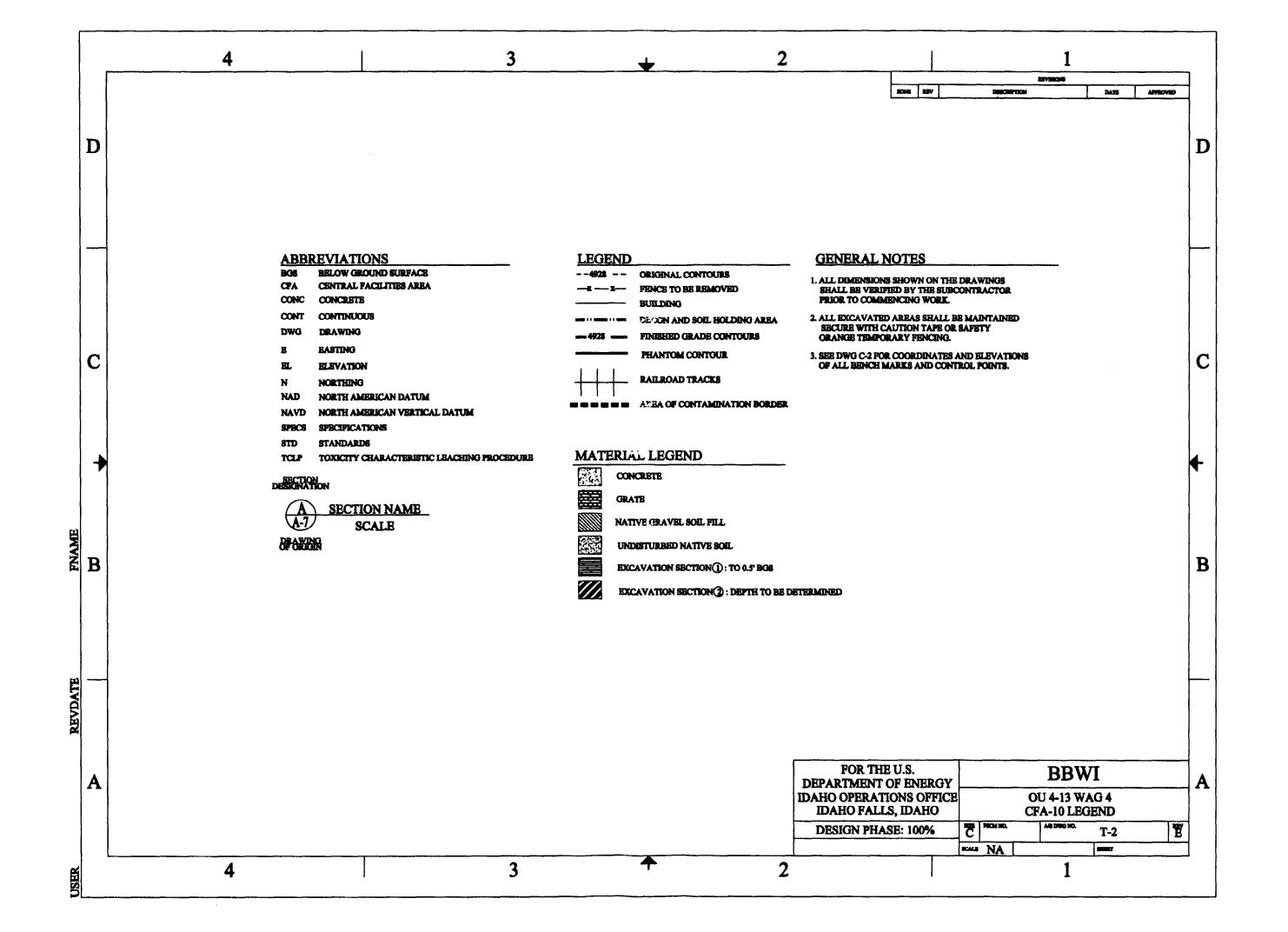
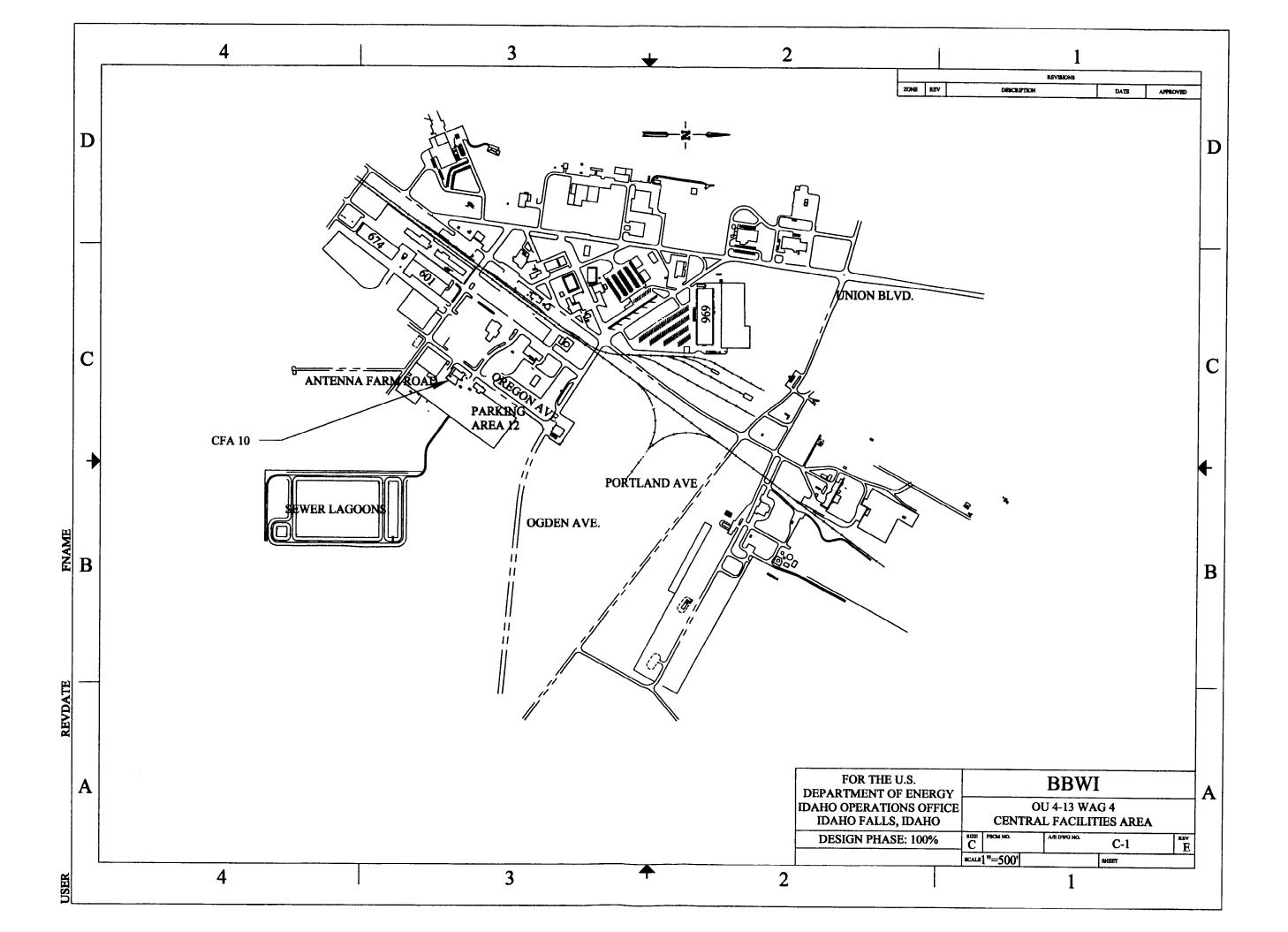
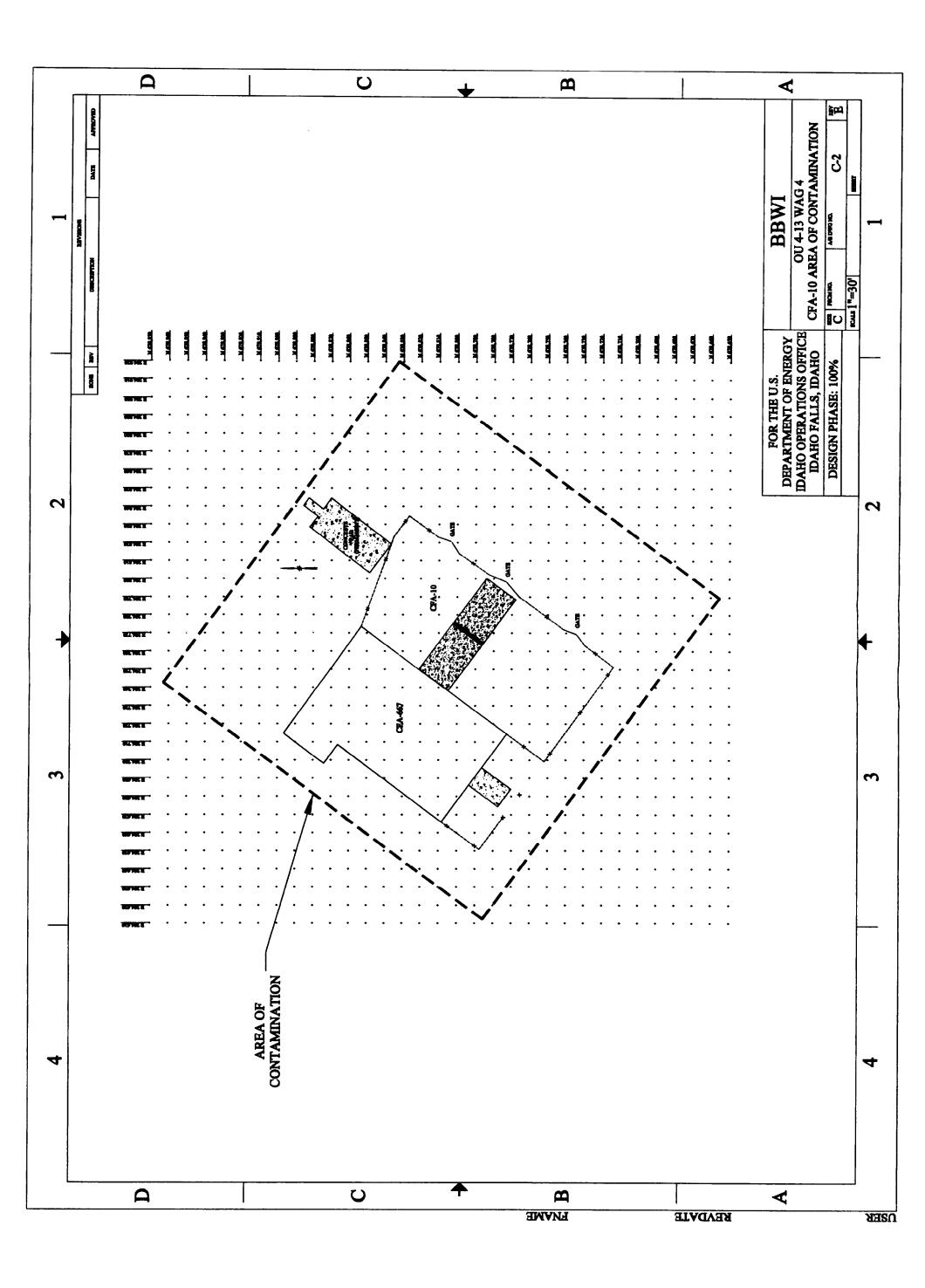
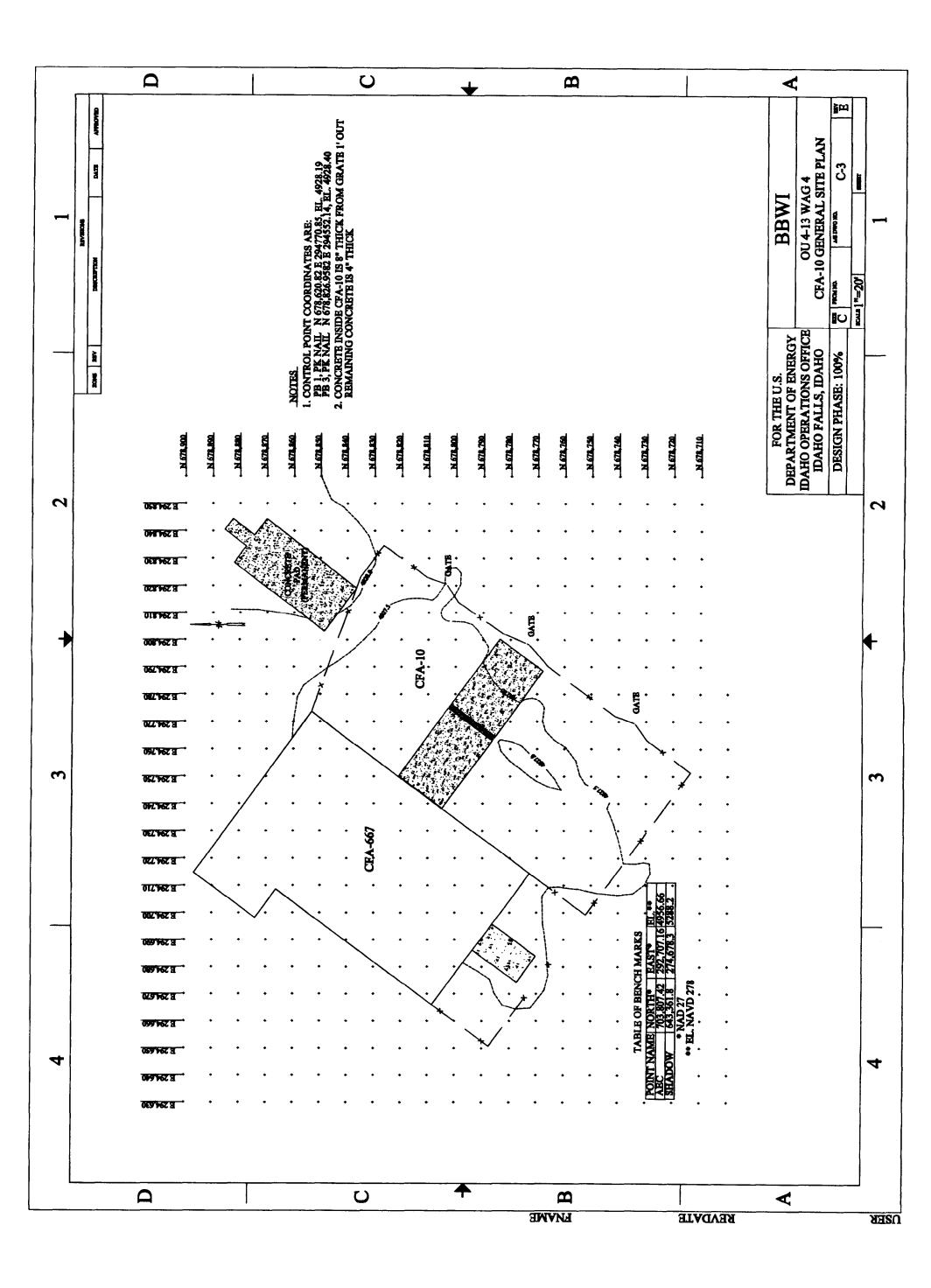
Appendix A Design Drawings

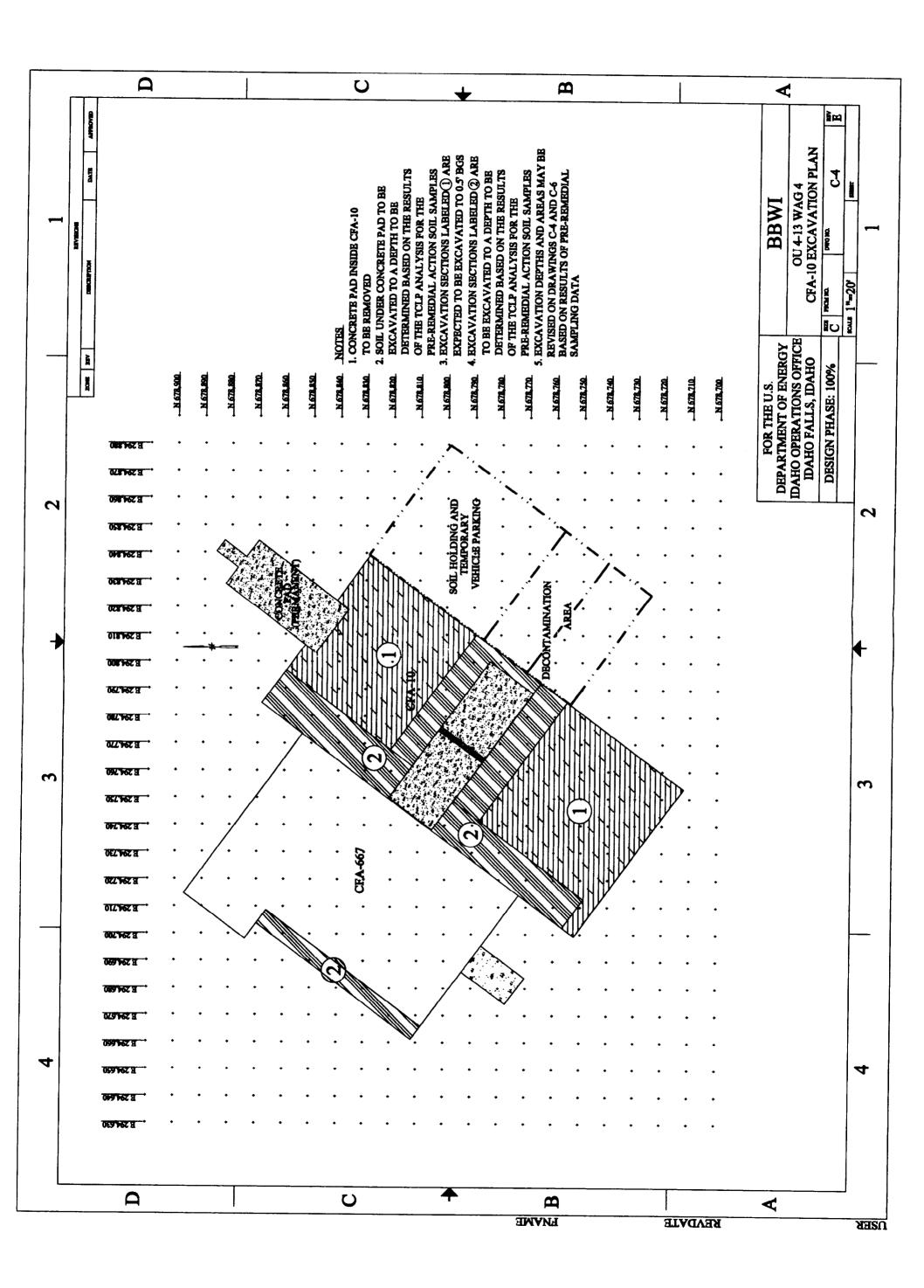


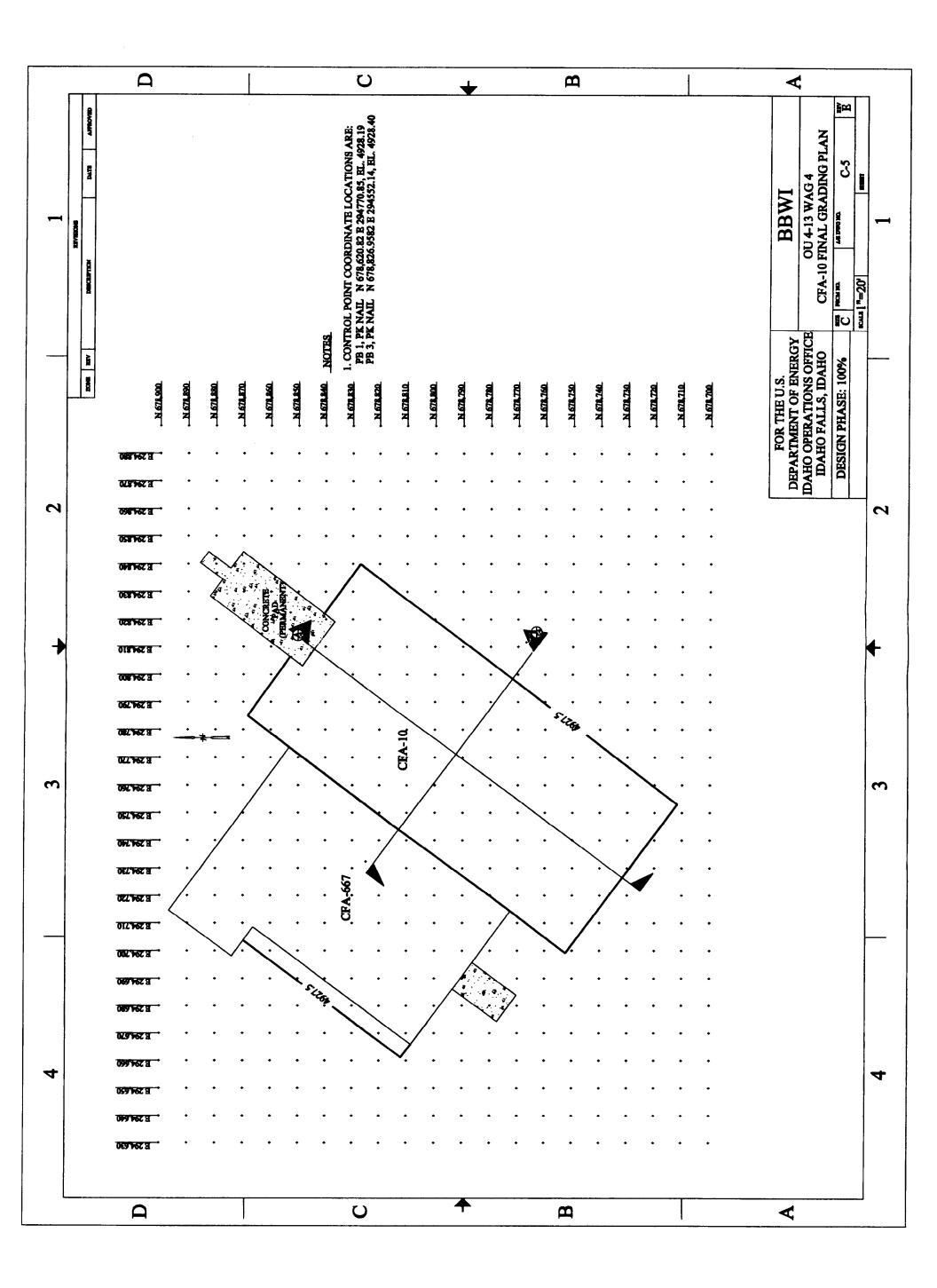


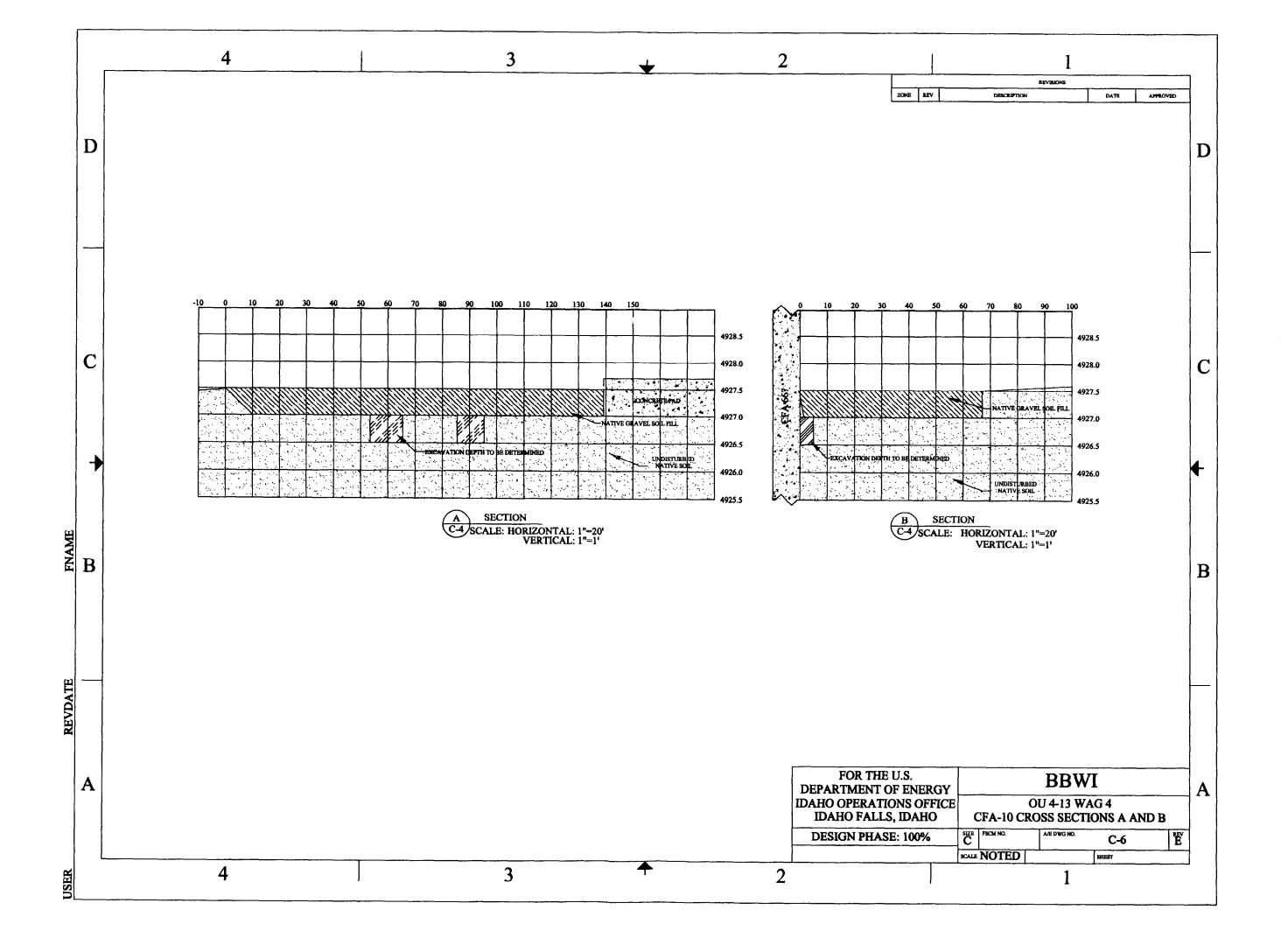












Appendix B Technical Specifications

Appendix B

Technical Specifications

RD/RA Design Specification List

Specification Number		Title	Page
01000	Definitions		ii
02200	Earthwork		B-1

SECTION 01000 DEFINITIONS

General Conditions

General Terms and Conditions for Construction Subcontractors on the Idaho National Engineering and Environmental Laboratory (INEEL)

Operating Contractor

INEEL Maintenance and Operations (M&O) Contractor, currently Bechtel

BWXT Idaho, LLC (BBWI)

Subcontractor

To be determined

SECTION 02200 EARTHWORK

B.1 PART 1—GENERAL

B.1.1 Scope of Work

B.1.1.1 Work Included

The Subcontractor shall furnish all materials, labor, tools, and equipment to complete excavation, trenching, and backfilling to be performed during construction activities in accordance with this specification and as shown on the design drawings C1–C6 in Appendix A. Earthwork includes grading and excavation; placement of native soil materials; placement of contaminated materials in approved containers; disposal of unsuitable materials; and reclamation of borrow areas.

B.1.1.2 Materials Procurement Notification

The Subcontractor shall follow the requirements of the contractor's statement of work, Vendor Data Schedule.

B.1.1.3 Work to be Performed by Others

The Operating Contractor will

• Review and approve submittals as required by this specification

- Review and approve results of quality assurance tests performed for compliance with this specification
- Document and monitor corrective actions
- Identify the acceptable onsite borrow locations
- Have the option to approve all soil compaction equipment prior to use
- Have the option to inspect and approve surface conditions prior to placement of each soil layer
- Have the option to inspect and approve all materials prior to placement
- Have the option to perform final inspection and acceptance of excavation, trenches, and backfilling
- Survey subgrade after excavation is complete
- Survey sampling points
- Survey the final grade after backfill is complete.

B.1.2 Reference Documents

Occupational Safety and Health Administration (OSHA)

- Code of Federal Regulations, Part 1926, Subparts I, D, O, P, Z, and G
- Pamphlet 2226, Excavation and Trenching Operations
- Code of Federal Regulations, Part 1910, Subpart J

INEEL Health, Safety, and Hazards Prevention Document

- INEEL/EXT-2000-1416, Health and Safety Plan, Central Facilities Area, Operable Unit 4-13, Transformer Yard (CFA-10)
- INEEL Company-wide Manual 14A, Safety and Health Occupational Health and Fire Protection
- INEEL Company-wide Manual 14B, Occupational Health
- DOE/ID-10857, Field Sampling Plan Idaho National Engineering and Environmental Laboratory, Central Facilities Area, Operable Unit 4-13, Transformer Yard (CFA-10)

B.1.3 Submittals

B.1.3.1 Procedures

The Subcontractor shall submit a work plan describing the equipment, materials, and methods to be employed to meet the requirements of this specification to the Operating Contractor for approval 20 calendar days prior to commencement of work.

The Subcontractor shall submit a Quality Assurance/Quality Control (QA/QC) Manual and demonstrate construction placement methods in accordance with this specification for the Operating Contractor's written approval 20 calendar days prior to their use.

B.1.3.2 Certifications

The Subcontractor shall submit a letter to the Operating Contractor verifying conformance to the requirements identified in these specifications within four workdays after completion of the work specified herein and prior to final acceptance of work.

B.1.3.3 Records

The Subcontractor shall submit to the Operating Contractor all field records from layout and field inspection activities within four workdays after completion of these activities.

B.1.4 Quality Assurance

The Subcontractor shall comply with the *Quality Assurance Project Plan for Waste Area Groups 1*, 2, 3, 4, 5, 6, 7, 10 and Inactive Sites (DOE-ID 2000b), latest revision.

The Subcontractor shall prepare, maintain, and use an Operating Contractor approved, written QA/QC Manual for the work performed. The QA/QC Manual shall be submitted within eight workdays after notice to proceed, and shall include requirements to ensure the application of the latest design documents and the incorporation of approved changes. As a minimum, the Subcontractor shall develop and maintain appropriate records that verify the quality and acceptance of materials, the application of approved procedures, the inspection records, and the appropriate approval signatures for acceptance of work performed.

B.2 PART 2—PRODUCTS

B.2.1 Equipment and Materials

B.2.1.1 Equipment

All equipment and tools used by the Subcontractor to perform the work shall be subject to inspection by the Operating Contractor before the work is started and shall be maintained in satisfactory working condition at all times. The Operating Contractor will inspect and accept all soil compaction equipment prior to the start of construction and follow manufacturer's specifications.

The Subcontractor's equipment shall be adequate for and have the capability to perform the indicated earthwork specified herein.

All equipment brought to the remedial site shall be identified to the Operating Contractor prior to delivery and shall be clean and free of any fluid leaks due to the potential for contamination. The Operating Contractor reserves the right to reject equipment not meeting these requirements.

B.2.1.2 Fill Material

Fill material shall be native soils and shall be generally free of plant material, roots larger than one inch in diameter, rubble, litter, insect infestation, and other deleterious matter.

B.2.1.3 Borrow Area Requirements

Soil and gravel or a soil/gravel mixture will be obtained from the Central Facilities Area (CFA) gravel pit.

B.2.1.4 Excavated Materials

The Subcontractor shall excavate and handle excavated materials regardless of its type, characteristic, composition, or depth condition. All materials excavated from trenching operations shall be stockpiled in designated areas for eventual reuse or disposal per Waste Generator Services (WGS) guidance.

B.3 PART 3—EXECUTION

B.3.1 Protection and Safety

- The Subcontractor shall keep all roads and parking areas adjacent to or part of this project usable at all times.
- The Subcontractor shall comply with the rules and regulations of Occupational Safety and Health Administration (OSHA) Construction Safety and Health Regulations 29 Code of Federal Regulations (CFR), Part 1926, Subpart P, Excavation, Trenching, and Shoring and the INEEL/EXT-2000-1416, Health and Safety Plan, Central Facilities Area, OU 4-13, Transformer Yard (CFA-10).
- The Subcontractor shall provide all necessary barricades, temporary walkways, lights, signs, signals, etc., for the protection of the workers and the public, as per the INEEL Health, Safety and Hazards Prevention Documents listed in Section 1.2 of this specification and the OSHA, Construction Safety and Health Regulation 29 CFR, Part 1926, Subpart G, Signs, Signals, and Barricades, whichever of the two is more stringent.
- The Subcontractor shall provide protection necessary to prevent damage to existing structures and facilities indicated on the drawings or indicated by the Operating Contractor to remain in place. The Subcontractor shall restore damaged property to the original condition and obtain written approval from the Operating Contractor.
- The Subcontractor shall clearly mark and post all lay down areas.
- The Subcontractor shall mark or otherwise indicate the location of existing monuments and markers, and protect these structures before construction operations commence. The Subcontractor shall be responsible for the marking and/or protection of all necessary objects.

• During earthwork operations, a representative of the Subcontractor shall be present at all times to observe and identify any areas requiring investigation. The Subcontractor shall notify the Operating Contractor immediately upon the discovery of any field deviations from the drawings or this specification.

B.3.2 Existing Utilities

There may be existing utilities within the limits of the construction area as shown on the design drawings.

- The Operating Contractor shall identify all utilities the Subcontractor is to protect during construction
- The Operating Contractor shall be immediately notified of the discovery of utilities not shown on the design drawings.

B.3.3 Backfilling and Backfilling Materials

The Subcontractor shall not commence backfilling until the Operating Contractor has approved the excavation work. The Subcontractor shall place backfill in maximum 8-inch loose lifts and then compact it. If the Subcontractor cannot attain compaction, the material shall be reworked to obtain compaction.

B.3.3.1 General Requirements

- Stockpiling of clean, imported material shall be confined to the Subcontractor's laydown and storage area as approved by the Operating Contractor. Stockpiled materials shall have stable slopes and be evenly graded and self-draining. Materials shall be stockpiled in such a way that precipitation runoff can be monitored and controlled, if necessary, to prevent escape from the stockpile area. The Subcontractor shall ensure that the stockpiling and handling of contaminated surface soils, if encountered, are confined within the limits of the work area.
- The Subcontractor shall place all materials to the lines, grades, and elevations as shown on the design drawings.
- The Subcontractor shall not begin placement of materials until after acceptance by the Operating Contractor.
- The Subcontractor shall not place materials on frozen surfaces, in standing water or use when materials contain snow, ice, or frozen materials
- The Subcontractor shall slope temporary grades to direct water away from the construction area to reduce the potential for ponding of water

B.3.3.2 Fill Material

- The fill material shall be placed in 8-inch loose lifts
- Soil material shall be compacted with a minimum of five passes of a smooth steel drum roller

• Subsequent lifts shall not be placed until the Operating Contractor has accepted the previous lift.

B.3.4 Inspection

The Subcontractor shall be responsible for preoperation, operation, and postoperation inspections during the performance of all work. The Operating Contractor reserves the right to inspect work for compliance with this specification.

B.3.5 Acceptance

The Subcontractor shall be responsible for documenting the number of compaction passes completed per lift. Placed materials not in accordance with the requirements of this specification shall be repaired and/or replaced by the Subcontractor. The Subcontractor shall submit a description of repair and/or replacement methods to the Operating Contractor for written approval before implementation. Acceptance criteria for repaired and/or replaced materials shall be in accordance with the original requirements of this specification.

Final acceptance shall be explicitly detailed by survey location and lift number or elevation. A final report to the Operating Contractor shall be submitted by the Subcontractor within 20 calendar days of the final acceptance detailing all field survey and quality control activities performed during construction operations.

^{1.} Results of Visual Inspection shall be recorded in the Daily Field Log.

^{2.} Number of passes test method refers to the minimum documented passes performed by the Subcontractor.

Appendix C Quality Level Evaluation

414.02 06/13/2000 Rev. 03

QUALITY LEVEL DESIGNATION AND RECORD

Quality Level Evaluation Performed By:	Leo Herbert	Date: <u>2/08/01</u>
Facility/Structure/System: CERCLA reme	diation of CFA-10 Transformer Yard	Quality Level: 4
IDENTIFICATION OF ITEM	QUALITY LEVEL DESIGNATION	TECHNICAL JUSTIFICATION
Note: Assign and record quality level in a approved form becomes a quality a	accordance with MCP-540, and obtain approassurance record. (Master Equipment List r	opriate approvals. Completed and may be used as a Q-List.)
Deborah Wagoner	Adoch a agome	2/08/01
Engineering Manager Concurrence Printed/Typed Name	Engineering Manager Concurrer Signature	ice / Date
Harry Williams	He Illens	2/12/01
Facility/Program/Project Approval Printed/Typed Name	Facility/Program/Project Approv Signature	al / Date

Appendix D Waste Management Plan

Appendix D

Waste Management Plan

This section describes the management of all wastes generated during the remedial action at the Central Facilities Area (CFA) Operable Unit (OU) 4-13 Transformer Yard (CFA-10). The waste management plan (WMP) identifies the types and volumes of wastes being generated and gives the requirements for waste transportation and ultimate disposal. The WMP uses the waste categories identified in the *INEL Reusable Property, Recyclable Materials, and Waste Acceptance Criteria* (RRWAC) (DOE-ID 1994a).

The RRWAC is binding on all entities authorized to use the facilities listed in the document for receiving reusable property, recyclable materials, or waste to be treated, stored, or disposed. The criteria applies to the CFA landfill. It is the responsibility of the generator to properly identify and segregate the material types identified in the RRWAC and to meet the requirements of the appropriate acceptance criteria. The Waste Generator Services (WGS) organization assists the generators in compliance with the RRWAC. Implementation of WGS is intended to streamline material and waste acceptance processes and to provide material and waste generators with turnkey management services through a single accountable organization. The prime objective of WGS is to maximize efficiency and eliminate material and waste management noncompliance conditions at the Idaho National Engineering and Environmental Laboratory (INEEL) (DOE-ID 1994a).

Off-INEEL designated facilities may have additional acceptance requirements not addressed in the RRWAC. Such requirements will be identified by WGS on a case-by-case basis (DOE-ID 1994a).

A summary of the waste streams generated from the remedial action activities is presented in Table D-1. The table identifies the waste type, provides the expected waste classification, and gives an estimate of the volume for each waste type

D.1 CHARACTERIZATION

In accordance with the Resource Conservation and Recovery Act (RCRA) (40 Code of Federal Regulations [CFR] 261.2), all wastes shown in Table D-1 are solid wastes. The RCRA defines solid waste as "a solid, liquid, or contained gas discarded by being abandoned, recycled, or is inherently wastelike." In compliance with RCRA (40 CFR 262.11), a hazardous waste determination must be prepared for all solid wastes. This determination includes a detailed chemical and physical analysis of representative samples of the waste and/or process knowledge as identified under 40 CFR 162.11.

Table D-1. Expected Waste Generated from Remedial Action Activities.

Waste Type	Expected Waste Classification	Estimated Volume
Administrative (paper, packaging, bottles, etc.)	Nonconditional Industrial	$.1 \text{ yd}^3$
Site Fencing (fence posts, wire fence, etc.)	Conditional Industrial	12 yd^3
Concrete Pad	Conditional Industrial	32 yd^3
Site Soil	Conditional Industrial	$140-260 \text{ yd}^3$
Personal Protective Equipment (gloves, booties, Tyvek, used sampling materials, decontamination materials, etc.)	Hazardous	.1 yd³
Site Soil	Hazardous	$< 120 \text{ yd}^3$
Lead pieces	Recycle	.3 yd ³

D.2 WASTE MANAGEMENT AND SEGREGATION

Minimizing waste generation will be a priority during work task planning and by efficient site operations, which do not generate waste unnecessarily. Waste streams generated during site activities will be segregated into nonconditional industrial (not reusable or recyclable), conditional industrial, and hazardous waste categories to facilitate subsequent waste management. Site personnel will conduct operations in a fashion that prevents the mixing of different waste types.

D.3 ONSITE MANAGEMENT AND DISPOSITION

Wastes generated from the Transformer Yard remedial action activities will be segregated, containerized, labeled, and stored in accordance with the substantive requirements of RCRA. After completion of site activities, or as sufficient quantities of waste have been accumulated to facilitate disposal, the waste will be characterized as necessary, manifested if required, and properly disposed in a permitted facility. Nonconditional industrial and conditional industrial wastes will be disposed at the INEEL Landfill Complex located at the CFA, following the protocols in the RRWAC.

A hazardous waste determination will be performed for the nonconditional industrial, conditional industrial, and hazardous waste streams prior to any waste disposal. A description of each waste stream is presented in the following subsections. All unused excess sample material, sample residues, and laboratory waste will be disposed by the subcontracted analytical laboratory in accordance with the requirements stated in the analytical services subcontract statement of work.

D.3.1 Non-Conditional Industrial Waste

The administrative waste (Table D-1) will primarily consist of used paper, tape, packaging material, bottles, cans, bags, lunch refuse, and other related materials associated with administrative functions. None of the nonconditional industrial waste will be reusable or recyclable. This waste will be contained in clear plastic trash bags that can be placed in a dumpster for disposal at the CFA Landfill Complex.

D.3.2 Conditional Industrial Waste

The conditional industrial waste (Table D-1) generated at the site will include the fencing material currently surrounding the site (metal fence posts, wire fencing, metal gates, signs, etc.), the concrete pad (concrete, metal drainage grate) located at the center of the site (Design Drawing C-2, Appendix A), and the nonhazardous soil. The volume of the fencing material is difficult to estimate due to the uncertain thickness of the material as it is compacted. The 300 ft³ (12 yd³) estimate fencing volume is based on approximate dimensions of 300 feet (91 meter) length by 6 feet (1.8 meter) height by 2 inches (5 cm) thick (as rolled or folded).

Prior to disposition, the conditional industrial waste will be surveyed using field analytical instruments to determine if the material contains hazardous substances. Conditional industrial waste that cannot be decontaminated or is suspected or shown analytically to be RCRA hazardous waste will be disposed as hazardous waste. Uncontaminated or nonhazardous conditional industrial waste will be recycled or disposed at the CFA Landfill Complex.

D.3.3 Hazardous Waste

The hazardous waste (Table D-1) that may be generated by remedial action activities consists of lead-contaminated personal protective equipment (latex gloves, rubber work gloves, booties, Tyvek coveralls, duct tape, respiratory protective air filters, etc.), nonrecyclable sampling materials (sample jars, plastic bags, sampling tools, etc.), nonrecyclable decontamination materials (paper towels, cleaning cloths, cleaning pads, plastic sheeting, etc.), and site soil tasked for removal. All wastes will be evaluated and hazardous waste determinations completed as required by RCRA regulations, properly containerized, and transported to an off-INEEL Treatment, Storage, and Disposal Facility (TSDF) in compliance with Department of Transportation (DOT) regulations.

D.4 PACKAGING

The conditional industrial waste consists of metal fencing and concrete pad materials. These materials will not be packaged for transport to the CFA landfill, but the vehicle shipping the materials will be suitably enclosed or covered to prevent roadside littering, attraction of vectors (such as rodents), or creation of other nuisances (DOE-ID 1994a).

Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must package the waste in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR Parts 173, 178, and 179 (40 CFR 262.30). The remedial design/remedial action (RD/RA) subcontractor shall contact WGS to determine the specific packaging requirements for the off-INEEL shipment of the lead-contaminated soil, and any other materials contaminated by site soil, to the TSDF.

D.5 LABELING

The conditional industrial wastes will not be labeled prior to shipment to the CFA landfill. Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must label each package in accordance with the applicable DOT regulations on packaging under 49 CFR Part 172 (40 CFR 262.31). The RD/RA subcontractor shall contact WGS to determine the specific labeling requirements for the offsite shipment of the lead-contaminated soil, and any other materials contaminated by site soil, to the TSDF.

D.6 STORAGE AND INSPECTION

The conditional industrial wastes will be removed from the site, screened for potential lead contamination, decontaminated (if necessary), and placed in a vehicle for transport to the landfill without storage.

Temporary storage units and remediation waste staging piles will be used to store lead-contaminated site soil, and possibly other contaminated materials, during the RD/RA activities. Temporary storage units used to store remediation wastes are regulated under 40 CFR 264.553. A remediation waste pile is an accumulation of solid, nonflowing remediation waste that is not in a containment building and is used only during remedial operations for temporary storage at a facility. Remediation waste staging piles are regulated under 40 CFR 264.554. The substantive requirements for temporary storage units and remediation waste staging piles are presented in subsection 4.2.5 of the CFA-10 Transformer Yard RD/RA Work Plan.

WGS will verify compliance with the applicable requirements of the RRWAC by audits or inspections of documentation and operations. Verification of the material or waste form may not be necessary when supporting data can be successfully verified (DOE-ID 1994a).

The RD/RA subcontractor shall contact WGS to determine the specific storage and inspection requirements for the conditional industrial waste, and for the offsite shipment of the lead-contaminated soil, and any other materials contaminated by site soil, to the TSDF.

D.7 TRANSPORTATION

Wastes generated as a result of remedial action activities at the Transformer Yard will be transported in accordance with the requirements identified in the RRWAC and appropriate DOT regulations.

Generators at the INEEL shall coordinate all onsite shipments through the WGS. Generators are responsible to contact WGS prior to the time waste generation is anticipated to ensure all requirements for pollution prevention, characterization, packaging, and receipt will be identified and met (DOE-ID 1994a).

Transportation of conditional industrial wastes to the CFA Landfill Complex will be performed by transporters that have obtained an INEEL Form 435.31, *INEEL Landfill Complex User's Permit*. INEEL Form 435.31 is issued at the INEEL Landfill Complex Office after the driver has successfully completed the required training (approximately 10 minutes of instruction). The permit is valid for one year from the issue date (DOE-ID 1994a).

The conditional industrial waste will be transported in vehicles that are designed and constructed to be readily emptied, kept clean, and that comply with the Idaho States Rules and Regulations and Idaho Solid Waste Management Regulations and Standards, Title 1, Chapter 6, 1–6012 (DOE-ID 1994a).

Interstate and intrastate transportation of hazardous waste is regulated by 40 CFR Part 263. Environmental Protection Agency (EPA) and DOT worked together to develop standards for transporters of hazardous waste in order to avoid conflicting requirements. Except for transporters of bulk shipments of hazardous waste by water, a transporter who meets all applicable requirements of 49 CFR Parts 171 through 179 and the requirements of 40 CFR 263.11 and 263.31 will be deemed in compliance with this part. Regardless of DOT's action, EPA retains its authority to enforce these regulations (40 CFR 263.10).

The RD/RA subcontractor shall contact WGS to determine the specific transportation requirements for the offsite shipment of the lead-contaminated soil, and any other materials contaminated by site soil, to the TSDF.